PROJECT
facts

DEPARTMENT OF ENERGY
OFFICE OF FOSSIL ENERGY

THE HEALY CLEAN COAL TECHNOLOGY PROJECT— A SHOWCASE OF CLEAN POWER FOR ALASKA

PRIMARY PROJECT PARTNER

Alaska Industrial Development and Export Authority
Anchorage, AK

MAIN SITE

Healy, AK

TOTAL ESTIMATED COST

$267,190,000

COST SHARING

DOE	**$117,300,000**
Non-DOE	**$149,890,000**

Project Description

The U.S. Department of Energy Clean Coal Technology Program is helping the State of Alaska protect its air quality while meeting its growing demand for affordable electricity.

In a project sponsored by Alaska's Industrial Development and Export Authority, a new 50-megawatt advanced coal-fired power plant will be built adjacent to an existing 25-megawatt unit in Healy, Alaska.

The new power plant will be a world showcase for advanced environmental technologies while also helping to open new markets for Alaska's abundant coal supplies. The installation will integrate an innovative spray dryer system with an advanced slagging combustion system. Emissions of sulfur dioxide (SO_2) and nitrogen oxides (NOx) will be controlled by a slagging combustion system and limestone injection. More SO_2 is removed with an activated recycle spray-dryer absorber system. Performance goals are NOx emissions of only 0.2 lb/million Btu and SO_2 removal of greater than 90%. Virtually all flyash particles will be removed before the flue gases are released to the atmosphere.

Coal will be supplied by the nearby Usibelli Coal Mine, and electrical power will be sold to the Golden Valley Electric Association.

Because of the plant's proximity to Denali National Park and Preserve (it is about four miles from the park's closest border), its potential impact on the park's air quality is of special concern. To protect the park, the project sponsors also agreed to install pollution-control equipment on the existing plant situated next to the planned facility.

While the power output from the combined units will be three times that of the older facility alone, the combined emissions from both units are expected to be only slightly greater than today's.

Program Goal

DOE's Clean Coal Technology Program seeks to demonstrate how the efficiency and environmental performance of coal-fired power-generating systems can be increased so that they can be highly profitable, and also able to comply with the most stringent environmental regulations.

The new Healy plant will have the capability to reduce currently uncontrolled NOx emissions from existing boilers by 75%, and from new boilers by up to 90%. It will be capable of removing 90% of potential SO_2 pollutants. The technology has a wide range of applications and is appropriate for any size utility or industrial boiler that should comply with the requirements of the Clean Air Act Amendments of 1990. It strongly promotes the goals of the Clean Coal Technology Program.

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CONTACT POINTS

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Project Partners

GOLDEN VALLEY ELECTRIC ASSOCIATION
Fairbanks, AK
(host utility)

STONE & WEBSTER ENGINEERING CORPORATION
Denver, CO
(engineering)

TRW, INC.
Redondo Beach, CA
(combustor supplier)

JOY TECHNOLOGIES, INC.
Houston, TX
(spray-dryer absorber supplier)

FOSTER WHEELER DEVELOPMENT CORPORATION
Clinton, NJ
(boiler supplier)

USIBELLI COAL MINE
Healy, AK
(coal supplier)

Project Benefits

The Healy Clean Coal Technology project will be a world showcase of innovative technologies that produce power with minimal impact on the most sensitive of environments.

In addition to control of SO_2 and NOx emissions, environmental benefits include production of environmentally benign solid wastes.

The innovative integrated coal-fired power plant concept is appropriate for any utility-scale or large industrial boiler that requires either new or retrofit applications. This technology can be used with a wide variety of coals, including high-ash coals, and offers cost-effective and reliable control of SO_2, NOx, and particulates.

In addition to these broad benefits, the Healy project offers many specific benefits to the State of Alaska:

- It will demonstrate the efficient combustion of low-sulfur Alaskan coal, increasing its attractiveness to the export market and especially to the Pacific Rim market.
- The plant will provide a low-cost source of stable power generation to customers of Golden Valley Electric Association. Because power will be sold under a long-term contract, customers will be able to lock in a source of known, low-priced baseload power.
- Construction of the project will create nearly 300 jobs. Once the plant is up and running, some 35-40 new permanent jobs will be created in the Healy and Fairbanks areas, including jobs at the nearby Usibelli Coal Mine.

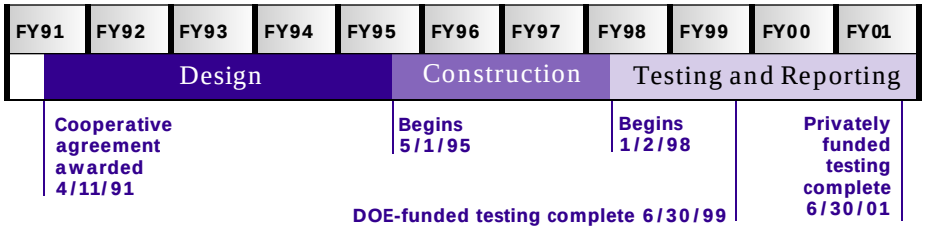
Located along the southern edge of Alaska's Interior Basin and near the border of Denali National Park and Preserve, the Healy project will also demonstrate how advanced environmental technologies can provide for economic growth while protecting our Nation's environment.

Cost Profile (Dollars In Millions)

	Prior Investment	FY95	FY96	FY97	Future Funds
Department of Energy *	$22.7	$20.5	$40.7	$23.2	$10.2
Private Sector Partners	$30.3	$21.7	$43.0	$23.2	$31.7

* Appropriated Funding

Key Milestones



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